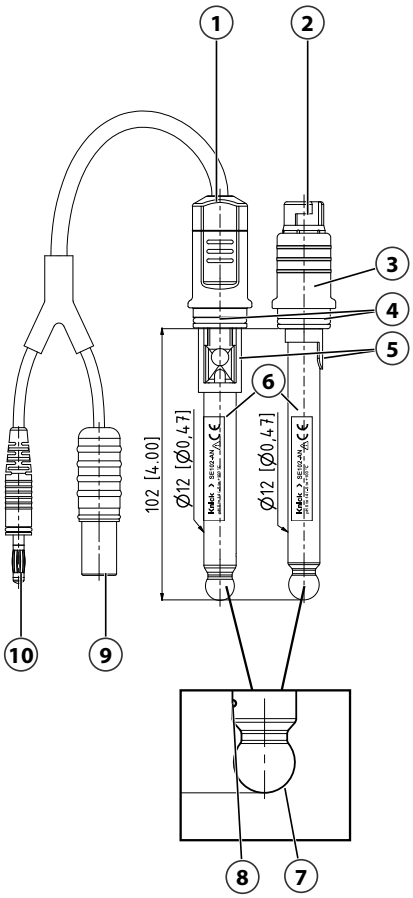
Knick

User Manual

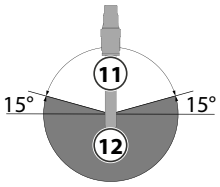
SE102

pH Sensor



All dimensions in millimeters [inches]

Installation orientation



1	Laboratory sensor head
2	Memosens connector
3	Serial number
4	O-ring (seal to Portavo quiver)
5	Stopper for refill opening
6	Nameplate
7	Sensor tip
8	Junction
9	DIN plug
10	4 mm plug
11	Permitted installation orientation
12	Prohibited installation orientation

Read before installation.
Keep for future use.

Safety

This document contains important instructions for the use of the product. Always follow all instructions and operate the product with caution. If you have any questions, please contact Knick Elektronische Messgeräte GmbH & Co. KG (hereinafter sometimes referred to as "Knick") using the information provided on the back page of this document.

Hazards due to pressure, temperature, aggressive media, or explosive atmospheres are possible, depending on the location of use.

Intended Use

The SE102 sensor (hereafter also called "product") is used for continuous pH measurement in aqueous media.

SE102N/1-NMSN	Digital pH sensor
SE102N	Analog pH sensor

Use of the product is only permitted in compliance with the operating conditions stated in the Specifications.

The measurement data of the sensor are output via a suitable industrial transmitter.

THE OPERATING COMPANY SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGES RESULTING FROM OR ARISING OUT OF AN UNINTENDED USE OF THE PRODUCT.

Personnel Requirements

The operating company shall ensure that any personnel using or otherwise interacting with the product is adequately trained and has been properly instructed.

The operating company shall comply and cause its personnel to comply with all applicable laws, regulations, codes, ordinances and relevant industry qualification standards related to product.

Hazardous Substances

IN THE EVENT OF ANY CONTACT WITH HAZARDOUS SUBSTANCES OR OTHER INJURY HEREUNDER, SEEK IMMEDIATE MEDICAL ATTENTION OR FOLLOW APPLICABLE PROCEDURES TO ADDRESS HEALTH AND SAFETY OF PERSONNEL. FAILURE TO SEEK IMMEDIATE MEDICAL ATTENTION MAY RESULT IN SERIOUS INJURY OR DEATH.

In certain situations, e.g., sensor replacement or cleaning, personnel may come into contact with the following hazardous substances:

- Process medium
- Cleaning medium

The operating company is responsible for conducting a job hazard analysis.

See the relevant manufacturers' safety datasheets for hazard and safety instructions on handling hazardous substances.

Product

Package Contents

- SE102 with hydration cap
- Hydration cap, fits in the Portavo quiver
- 20 ml KCl bottle
- User Manual
- Quality Certificate

Product Identification

Only valid for SE102N/1-NMSN.

pH Sensor		SE102	_ / _ - _ _ _
Explosion protection	Without		N /
Sensor length	102 mm		/ 1
Pt electrode	Without		- N
Electrical connections	Memosens connector		MS
Glass material	Alpha glass		N

Product Characteristics

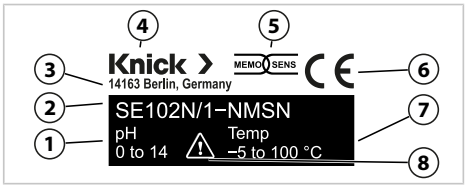
- Ceramic junction
- Integrated temperature detector

Note: The temperature detector measures the temperature as a secondary parameter. This measurement is intended for automatic compensation of the measured value.

Nameplate

The SE102 sensor is labeled with a nameplate on the sensor body.

Example:



1	Measuring range	5	Memosens logo
2	Manufacturer address	6	CE mark
3	Product designation	7	Permitted temperature range
4	Manufacturer	8	Special conditions and danger points

Item number/serial number/product date in form ******/********/YYWW are printed on the packaging.

Refer to the packaging for more information on approvals and disposal.

Installation

⚠ CAUTION! Risk of cutting injuries from broken sensor glass. Handle the sensor with care.

01. Check the SE102 sensor for damage.
    Note: Replace damaged sensors.
02. Remove the hydration cap.
03. Briefly rinse the sensor with pure water and pat dry.
    Note: Strong dry rubbing of the pH sensitive glass increases the response time of the sensor.
04. Remove air bubbles from the sensor tip by flicking the sensor upwards.
    Note: Air bubbles in the sensor tip distort the measurement result.
05. Install the sensor at the installation location.
06. Align the junction in the flow direction of the medium.
07. Connect the SE102N/1-NMSN sensor with a Memosens sensor cable.
08. Connect the sensor cable to a transmitter[1].

[1] Observe the User Manual for the transmitter.

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Operation

01. Clean the sensor after every work cycle.
    Note: Adjust the cleaning intervals to the operating conditions.
02. During work breaks or measurement interruptions, store the sensor in the hydration cap filled with electrolyte (3 mol/l KCl).
    Note: Do not allow process media to dry on the sensor tip and junction.

Refilling Electrolyte

01. Remove the stopper **(5)** from the refill opening.
02. Fill electrolyte 3 mol/l KCl into the refill opening using a disposable syringe or similar.
03. Seal the refill opening with a stopper **(5)**.

Cleaning

⚠CAUTION! Injury due to the use of aggressive cleaning agents. Handle aggressive cleaning agents with care; wear protective equipment if necessary. Observe safety instructions.

Clean the sensor in case of soiling and deviations in slope, zero point, and/or response time.

01. Remove soiling with an appropriate cleaning agent.
02. Rinse the sensor with demineralized water.

Recommended Cleaning Agents

Contamination	Cleaning Medium
Water-soluble substances	Water
Greases and oils	Warm water and household dishwashing liquid
Lime and hydroxide deposits	Acetic acid (5 %) or hydrochloric acid (1 %)
Protein	Pepsin/HCl solution
Silver sulfide	Thiourea/HCl solution

Calibration

If necessary, remove the SE102 sensor before calibration. Two-point calibration is recommended.

Calibrate in accordance with the user manual of the transmitter.

Removal

⚠WARNING! For process media that contain hazardous substances: The SE102 sensor has direct contact with the measured medium. Rinse and clean the SE102 after removing it from the measured medium. Follow the information on hazardous substances.

01. Disconnect the SE102N/1-NMSN sensor from the sensor cable.
02. Clean and store the sensor.

Storage

Seal the refill opening with a stopper **(5)**.

Immerse the sensor tip and the junction in the hydration cap filled with electrolyte (3 mol/l KCl) for storage. If the sensor is unintentionally stored dry, soak the sensor in electrolyte (3 mol/l KCl) for several hours.

Disposal

To dispose of the product properly, follow the local regulations and laws.

Waste devices must be separated from unsorted municipal waste before disposal.

Information on return and recycling can be found in the manufacturer's declaration on our website.

Specifications

pH measuring range	0 … 14
Media temperature	–5 … 100 °C (23 … 212 °F)
Temperature detector	
SE102N/1-NMSN	NTC 30 kΩ
SE102N	Pt1000
Wetted materials	
Body	Glass
Junction	1x ceramic
Reference system	Ag/AgCl with liquid electrolyte
Electrical connection	
SE102N/1-NMSN	Memosens connector
SE102N	Fixed cable with DIN plug and 4 mm plug
Dimensions	See graphic

Translation of the original instructions
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Version 1

This document was published on February 20, 2026.

The latest documents are available for download on our website under the corresponding product description.

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